

Amendment to the Specification:

Please replace example 2 with the following amended paragraph:

Example 2

Effect of Stabilization by Neutralization and Oil Dilution of the PIB on Sultone
Formation

In a falling film reactor, SO₃ in air was reacted with a mixture of 70 wt% PIB having a Mn of 550 MW and 30 wt% oil (Group I 100 Neutral Oil) using the following conditions: SO₃/PIB molar ratio = 0.900; feed temperature = 90°C.; reactor temperature = 67.5°C.; SO₃ concentration in air = 1.4%; SO₃ loading = 0.347 kg.cm^{-hr}; SO₃/Air gas inlet temperature = 50°C.; PIB feed flow rate = 18.10 kg/hr; SO₃ flow rate = 1.66 kg/hr. Immediately (within 5 seconds) after formation in the sulfonation reactor, the mixture of PIB sulfonic acid and oil was stabilized by neutralization with a lime-oil slurry (10.6 wt% Ca(OH)₂ in Group I 100N oil). The degree of neutralization was 145%. After mixing the PIB sulfonic acid with the lime slurry, the mixture was passed through an inline static mixer and then into a stirred tank neutralization vessel held at 72°C. Chromatographic analysis of the stabilized product showed it to contain 26.0 wt% recovered PIB, 4.7 wt% sultones, and 69.3 wt% sulfonic acid, correcting for the diluent oil.